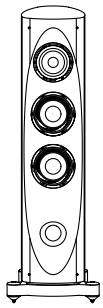
Pioneer sound.vision.soul

Service Manual



ORDER NO.
RRV3337

SPEAKER SYSTEM

S-1EX XTW/E

NOTE

As this speaker system weighs approx. 66 kg, be sure to have two people work on it. If this speaker system will be turned on its side for servicing, lay it on a piece of soft cloth, etc., to protect the cabinet from being scratched.

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

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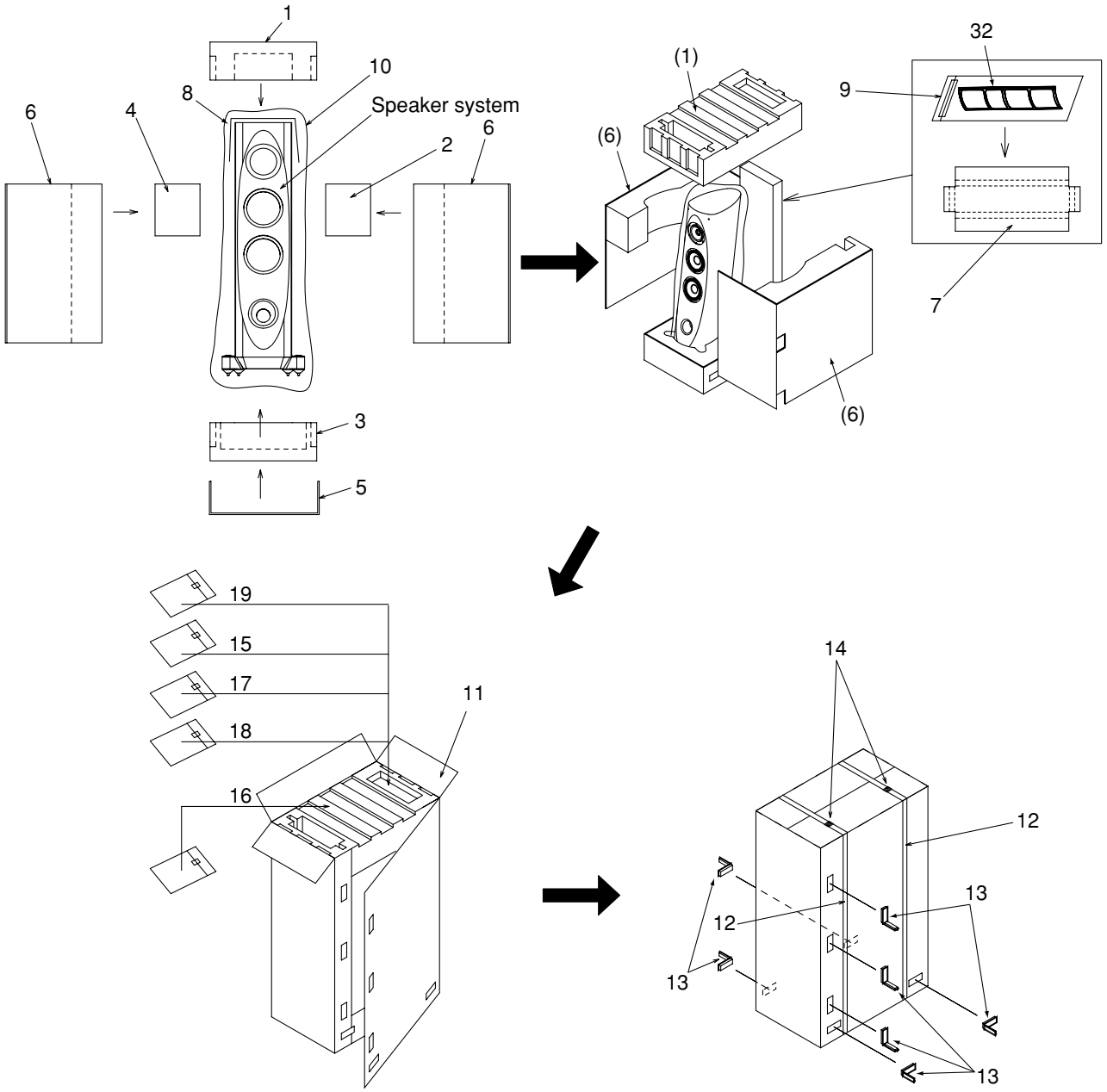
1. PARTS LIST

NOTES : ● *Parts marked by " NSP " are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

1.1 PACKING

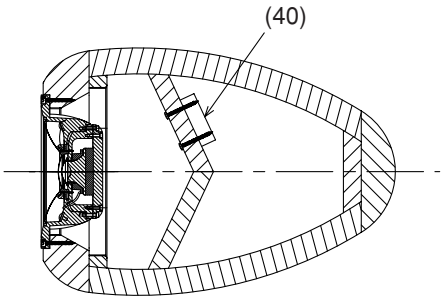


PACKING Parts List

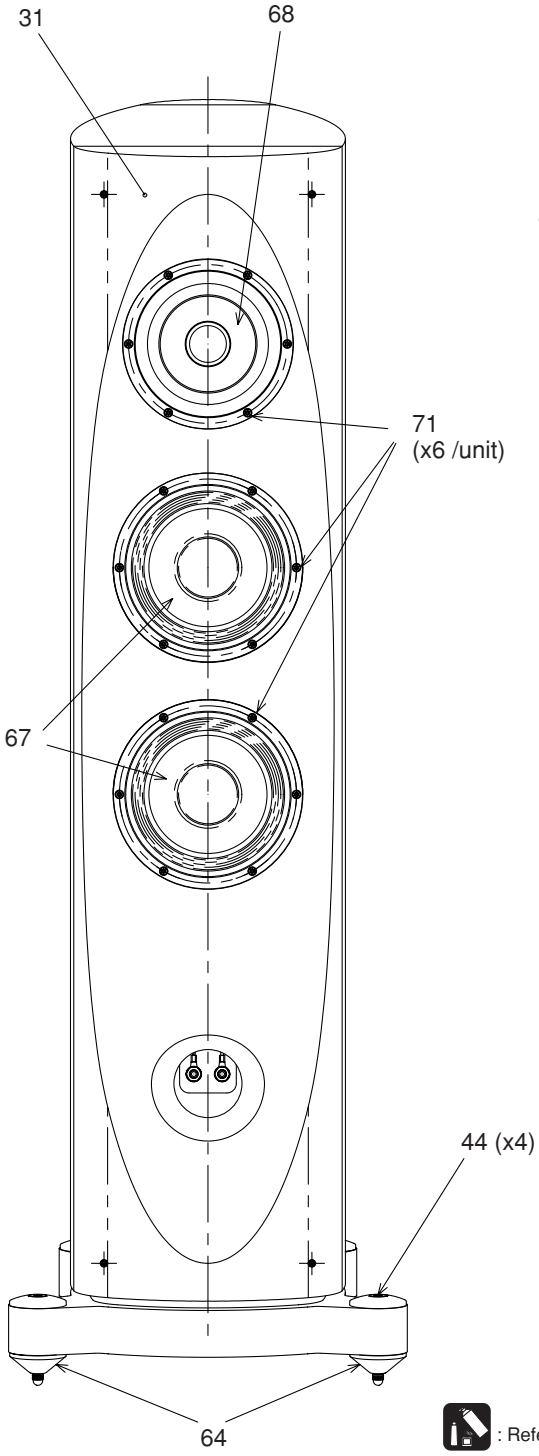
Mark	No.	Description	Part No.
	1	Top Protector	SHA6081
	2	Middle Protector (R)	SHA6082
	3	Bottom Protector	SHA6083
	4	Middle Protector (L)	SHA6090
	5	Packing Case (bottom)	SHB6032
	6	Protector (middle)	SHB6033
	7	Protector (grille)	SHB6034
	8	Protection sheet	SHC1843
	9	Protection sheet	SHC6037
	10	Protection sheet	SHC6040
	11	Packing Case	SHG6207
NSP	12	PP Band	SHX6001
	13	Joint for Packing Case	SNK6124
NSP	14	Stopper (for PP band)	SNK6127

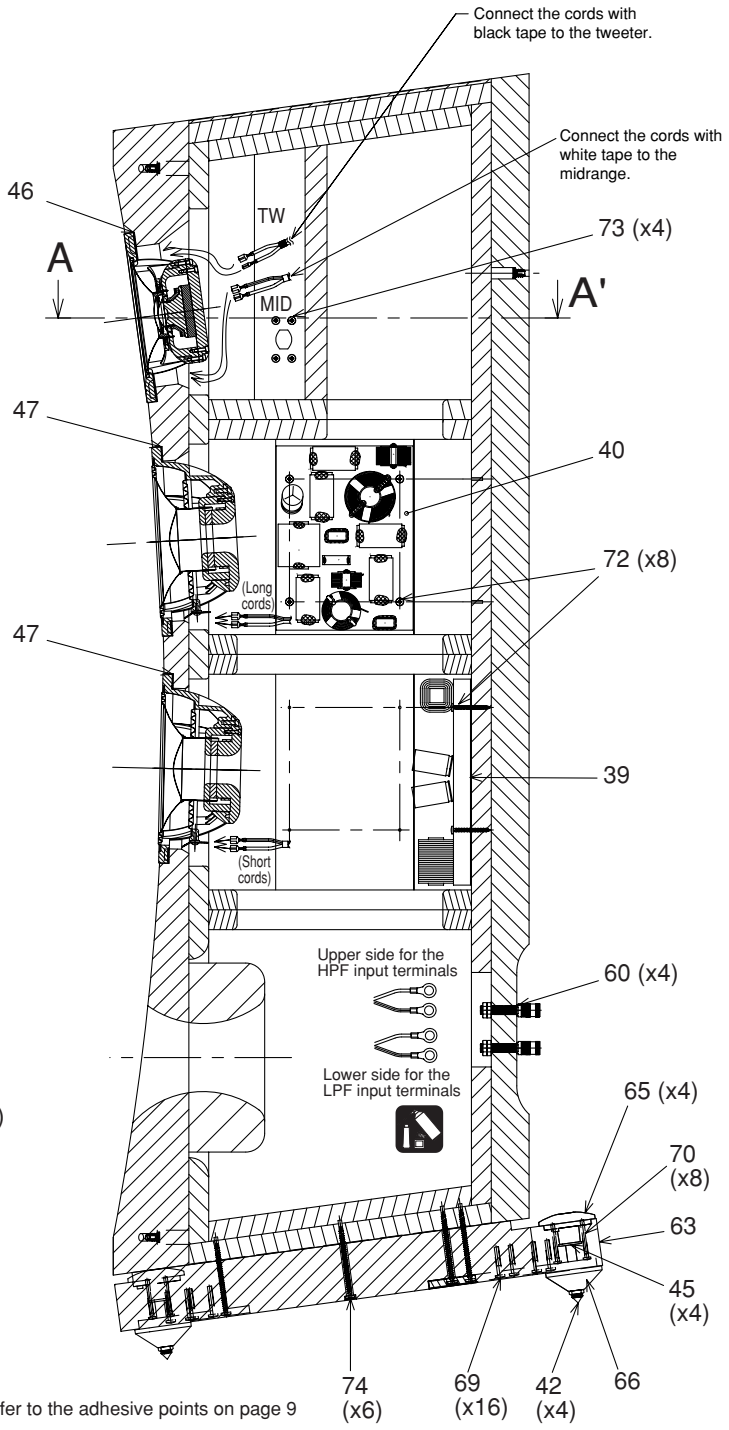
Mark	No.	Description	Part No.
NSP	15	Accessory Set	SME6034
		├ Spike Bases	SBG6003
		├ Nuts (for spike)	SBA6057
		├ Hex Wrench	SEX6002
		└ Polyethylene Bag S0	SHL1412
NSP	16	Accessory Set	SME3716
		├ Operating Instructions (English, French, Spanish, Simp-Chinese, Trad-Chinese)	SRD1310
		└ Polyethylene Bag S2	SHL1265
NSP	17	Accessory Set	SME6036
		├ Fastening Screws (for grille)	SLH6013
		├ Finishing Screws (for grille)	SLH6014
		└ Polyethylene Bag S0	SHL1259
NSP	18	Accessory Set	SME6037
		├ Screw (for metal catch)	BMZ40P120FTB
		├ Metal Catch	FRNH-028
		└ Polyethylene Bag S0	SHL1259
NSP	19	Accessory Sset (for grille holes)	SME6047
		├ Caps (for grille holes)	SEC2068
		└ Polyethylene Bag S0	SHL1259
NSP		Label Serial	SRW1112

1.2 SPEAKER SYSTEM



A-A' Sectional view



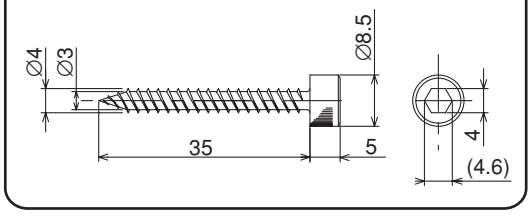


: Refer to the adhesive points on page 9

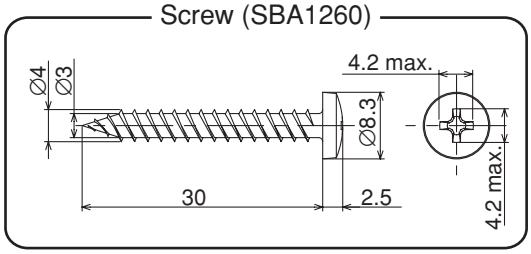
SPEAKER SYSTEM Parts List

Mark	No.	Description	Part No.
NSP	31	Cabinet	SMM2026
NSP		└ Fung Nut M4 (for grille, metal catch)	SBN1066
	39	Network ASSY (low pass)	SWN1758
	40	Network ASSY (high pass)	SWN1759
	42	Spike (height adjustment screw)	SBA6044
	44	Spike Cover (for spike (top))	SEB6012
	45	Rubber Ring (vibration deadening)	SEB6013
NSP	46	Gasket (for MID/TW)	SEC2031
NSP	47	Gasket (for WF)	SEC2032
NSP	60	Gasket (cabinet-input terminals)	SEC2065
NSP	63	Wood Base	SMS6017
NSP		Acoustic Absorbent (inside the chamber and baffle board corner)	SMT1312
NSP		Acoustic Absorbent (under the duct, back board, behind the duct)	SMT1313
NSP		Acoustic Absorbent (chamber, side board)	SMT1314
NSP		Acoustic Absorbent (around the duct board)	SMT1315
NSP		Acoustic Absorbent (duct board side/upper roll)	SMT1316
NSP		Acoustic Absorbent (black, behind the duct)	SMT1318
NSP		Acoustic Absorbent (chamber/holes, input terminals)	SMT1320
NSP		Acoustic Absorbent (inside chamber/top)	SMT1329
	64	Bottom Spike (spike bottom)	SNH6010
	65	Spike (top)	SNH6011
	66	Bottom Spike	SNH6017
	67	Speaker (WF)	B18IU60-52H
	68	Speaker (MID/TW)	A14GR55-52DX
	69	Screw (bottom spike - base)	BKC50P300FTB
	70	Screw (spike top - base)	BMZ40P400FTB
	71	Hexagon Socket Screw (for WF, MID/TW)	SBA1225
	72	Screw (for NW assy)	SBA1260
	73	Screw (for closure panel)	SBA1261
	74	Screw (base - cabinet)	SBA1262

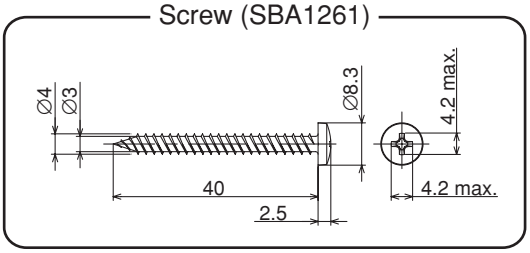
Screw (SBA1225)



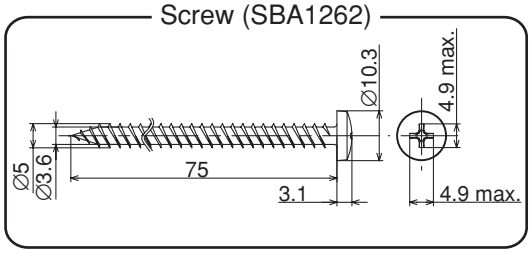
Screw (SBA1260)

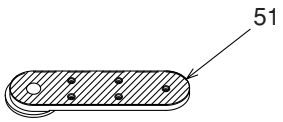


Screw (SBA1261)

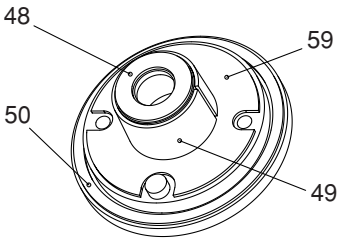


Screw (SBA1262)

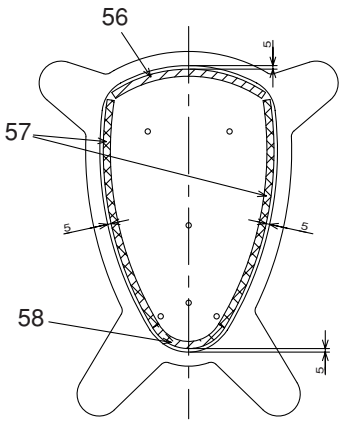




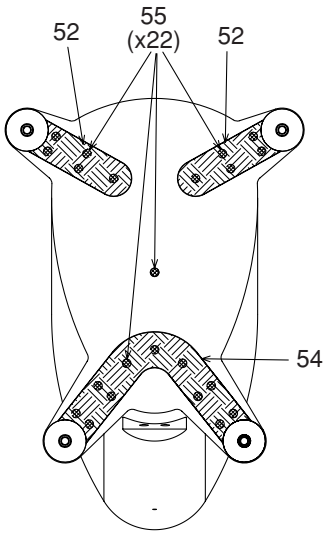
Specification for attaching the packing for the Bottom spike



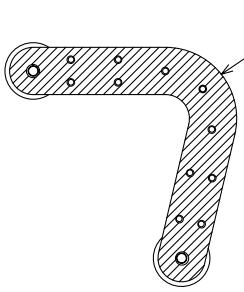
Specification for attaching the packing for the Spike (top)



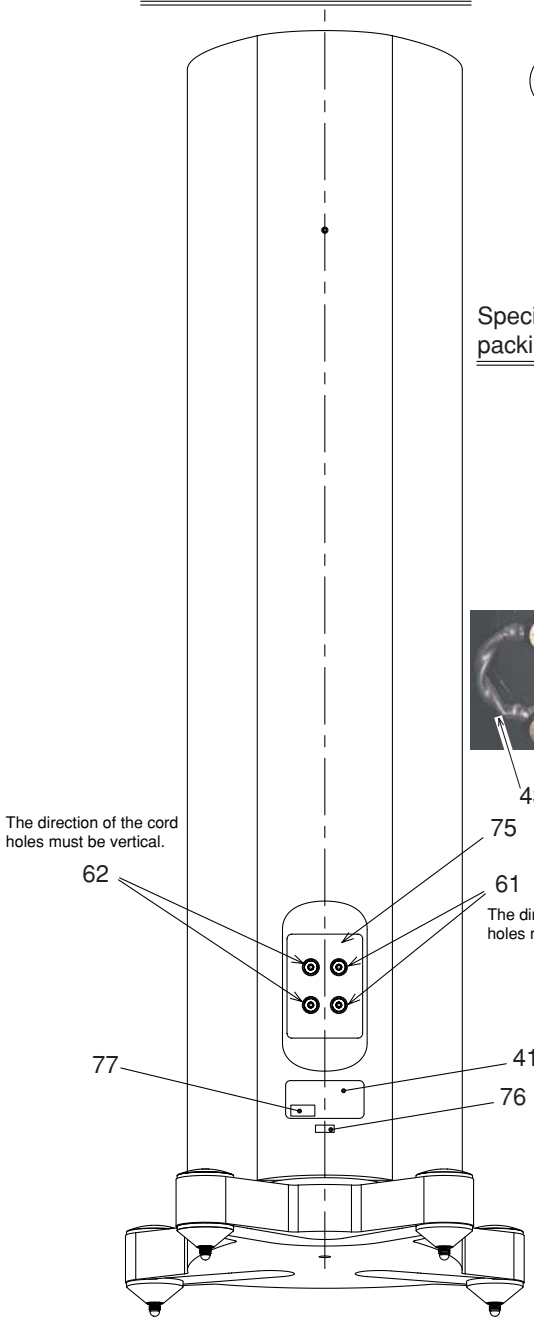
Specification for attaching the packing for the base (top side)

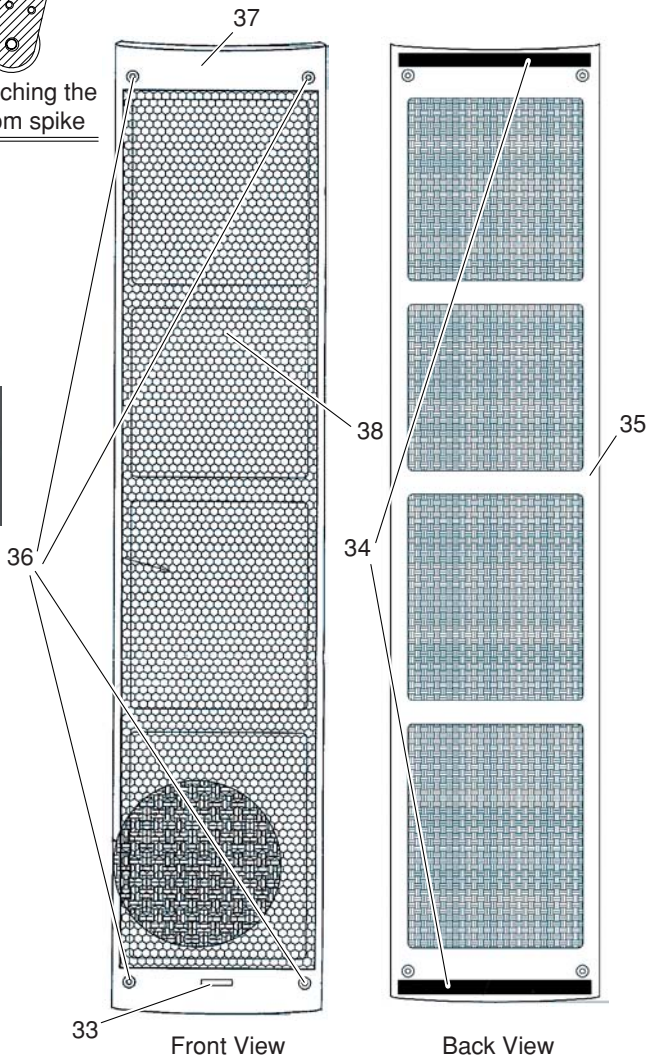


Specification for attaching the packing for the base (bottom side)



Specification for attaching the packing for the Bottom spike





No.32 Grille

SPEAKER SYSTEM Parts List

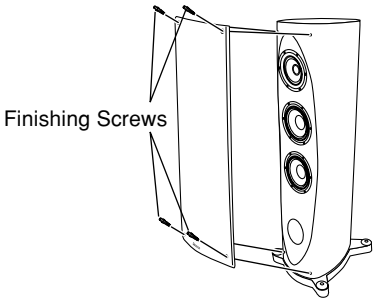
Mark	No.	Description	Part No.
	32	Grille	SMG6093
	33	├─Badge	FRAM-048
	34	├─Packing	SEC6060
NSP	35	└─Grille ASSY	SMG6094
NSP	36	├─Fung Nut	SBN6019
NSP	37	├─Grille Frame	SMC6002
NSP	38	└─Punching Net	SNH6013
NSP	41	Sticker	SAN3871
	43	Cord	SDS1192
NSP	48	Gasket (for spike (top))	SEC2043
NSP	49	Gasket (for spike (top))	SEC2044
NSP	50	Gasket (for spike (top))	SEC2045
NSP	51	Gasket (for bottom spike)	SEC2046
NSP	52	Gasket (for bottom spike)	SEC2047
NSP	53	Gasket (for bottom spike)	SEC2048
NSP	54	Gasket (for bottom spike)	SEC2049
NSP	55	Gasket (for screw holes)	SEC2050
NSP	56	Gasket (base top)	SEC2051
NSP	57	Gasket (base top)	SEC2052
NSP	58	Gasket (base top)	SEC2053
NSP	59	Gasket (for spike (top))	SEC2055
	61	Input Terminal (Red)	SKX6027
	62	Input Terminal (Black)	SKX6028
NSP	75	Model Label	SAN3790
NSP	76	Country Label	SAN3782
NSP	77	Label Serial	SRW1111

2. FOR PRECAUTION OF REASSEMBLY AND DISASSEMBLY

2.1 GRILLE

How to disassemble

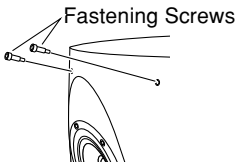
① Loosen the finishing screws. Then remove the grille.



Note 1:
You may remove the fastening screws if they impede disassembly.

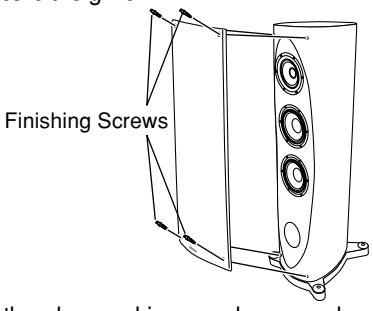
How to reassemble

① Insert the supplied fastening screws into the screw holes at the four corners of the speaker front.



② Place the grille with the badge located at the lower part, aligning the 4 holes of the grille with the fastening screws inserted in Step ①.

③ Tighten the supplied finishing screws into the fastening screws to secure the grille.



Note 2:
Do not use a flathead screwdriver or a hexagonal wrench to tighten the screws. Securing the screws too tightly may damage the cabinet.

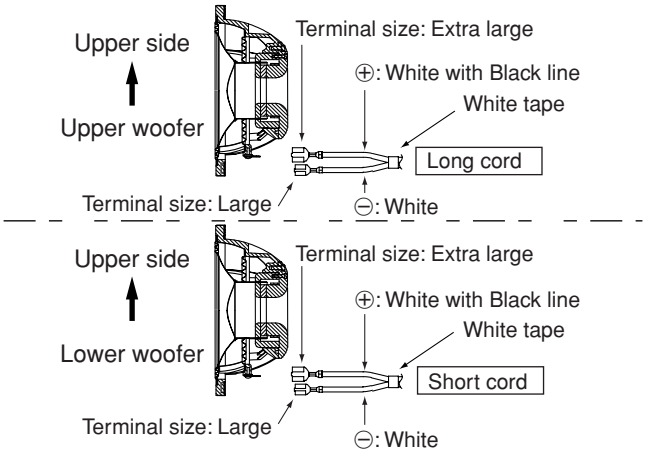
2.2 SPEAKER UNIT

For better audio quality, the receptacle terminals and terminal fittings of the speaker unit are soldered. Two people are required for servicing of this speaker unit: one to hold the removed unit and another to solder.

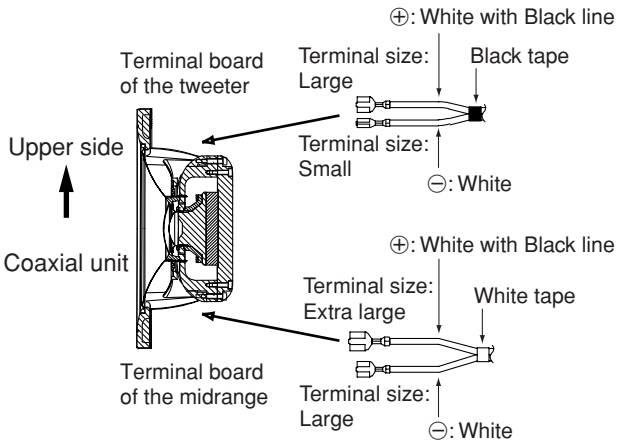
Tools to be used

- Hexagonal wrench (4 mm): GGK1024
- Soldering gun: GGK1069
- Lead-free solder: GYP1006

- The woofer is attached to the baffle board with 6 hexagon-socket screws from the outside.
  When disassembling, remove all these screws, pull out the woofer, then remove the solder to disconnect the cords.
  When reattaching, after connecting the cords, solder the terminals for the woofer then place the woofer so that the terminal board comes to the lower side.



- The midrange and tweeter are integrated into a coaxial unit. This coaxial-unit speaker is attached to the baffle board with 6 hexagon-socket screws from the outside.
  When disassembling, remove all these screws, pull out the coaxial-unit speaker, then remove the solder to disconnect the cords.
  When reattaching, connect the cord with black tape to the tweeter and the cord with white tape to the midrange then solder the terminals. Place the coaxial unit so that the terminal board of the midrange comes to the lower side then turn it counterclockwise slightly to secure it.



2.3 NETWORK ASSY

Before removing the Network Assy, remove the grille and each speaker unit then disconnect the cords from the speaker unit.

• For removal/reattachment of the Network Assy for the woofer: Only the woofer must be removed.

• For removal/reattachment of the Network Assy for the midrange/tweeter: Removal of all the units is required.

2.3.1 Network Assy for the Woofers

• The Network Assy for the woofers is located inside the back board behind the lower woofer and secured with 4 screws.

(1) Remove the acoustic absorbent pads at the input terminals. (See Figs. 2-5 to 2-8.)
(2) Remove the 2 nuts that secure the round connectors from the lower input terminals.
(See Fig. 2-1. Tool: Box wrench, 14 mm/GGH-002)
(3) Remove the 4 screws that secure the Network Assy then pull the Assy out through the hole where the woofer was attached. (See Fig. 2-2.)
(4) When reattaching, pass the Network Assy through the hole where the lower woofer was attached then secure it in place with the 4 screws. (See Fig. 2-2.)
(5) Among the 3 pairs of cords from the Network Assy, connect the cords with black tape to the lower input terminals and secure them with the nuts.
(See Fig. 2-1. Tool: Box wrench, 14 mm/GGH-002)
(6) Apply adhesive to the secured nuts.
(Adhesive: DIABOND black/GYL-014)
(7) Reinstall the acoustic absorbent pads at the input terminals. (See Figs. 2-5 to 2-8.)
(8) Among the 3 pairs of cords from the Network Assy, connect and solder the remaining 2 pairs of cords with white tape to the woofer and reattach the woofer in the cabinet.

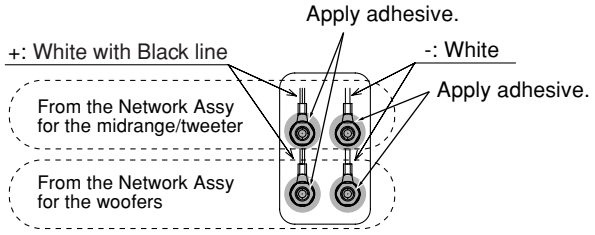

Apply adhesive.
+: White with Black line
-: White
Apply adhesive.
From the Network Assy for the midrange/tweeter
From the Network Assy for the woofers

Fig. 2-1: Input terminals (inside the cabinet)

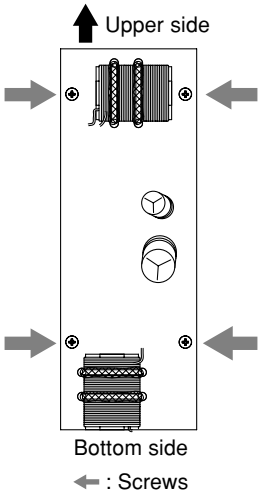


Fig. 2-2: Specifications for attaching the Network Assy for the woofers

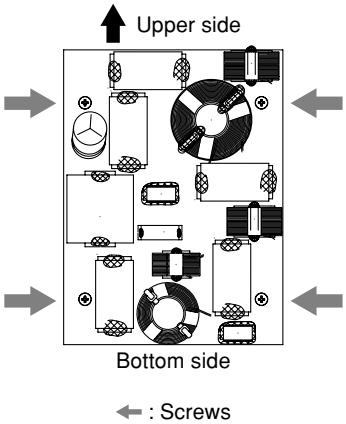


Fig. 2-3: Specifications for attaching the Network Assy for the midrange/tweeter

2.3.2 Network Assy for the midrange / tweeter

• The Network Assy for the midrange/tweeter is attached to the inside of the left side board behind the upper woofer, using 4 screws.

(1) Remove the acoustic absorbent pads at the input terminals, inside and at the rear of the chamber, and behind the chamber.
(See Figs. 2-5 to 2-8 and 2-9 to 2-11.)
(2) Remove the 2 nuts that secure the round connectors from the upper input terminals.
(See Fig. 2-1. Tool: Box wrench, 14 mm/GGH-002)
(3) Remove the 4 screws that secure the closure panel inside the chamber, remove the 4 screws that secure the Network Assy, and pull the Network Assy out through the hole where the woofer was attached.
(See Figs. 2-3 and 2-4. Tool: Screwdriver/GGK1012)
(4) When reattaching, pass the Network Assy through the hole where the upper woofer was attached and secure it in place using the 4 screws.
(See Fig. 2-3. Tool: Screwdriver/GGK1012)
(5) Among the cords from the Network Assy, connect the cords with the round connectors to the upper input terminals and secure them with the nuts.
(See Fig. 2-1. Tool: Box wrench, 14 mm/GGH-002)
(6) Apply adhesive to the secured nuts.
(Adhesive: DIABOND black/GYL-014)
(7) Pass the 2 pairs of cords from the closure panel through behind the chamber then secure the closure panel from inside the chamber, using the 4 screws.
(See Fig. 2-4.)
(8) Reinstall the acoustic absorbent pads at the input terminals, inside and rear of the chamber, and behind the chamber.
(See Figs. 2-5 to 2-8 and 2-9 to 2-11.)
(9) Connect and solder the cords to the coaxial-unit speaker and reattach it in the cabinet.

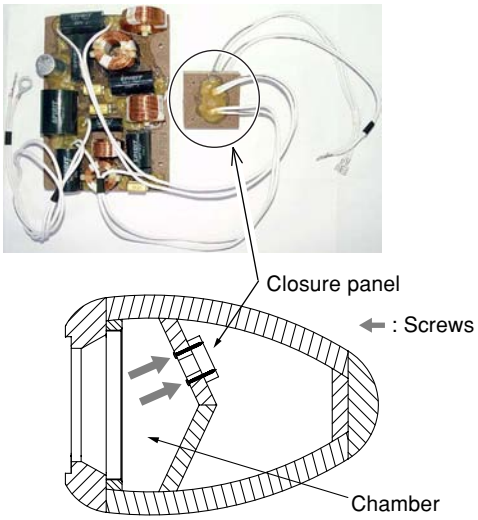


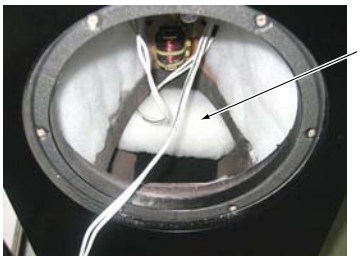
Fig. 2-4: Specifications for attaching the closure panel (cross-sectional view of the coaxial-unit speaker)

2.3.3 Removal/Reattachment of Acoustic absorbent pads

Removal/reattachment of acoustic absorbent pads is necessary before or after removal/reattachment of the Network Assy.

Note:
When reattaching the Network Assy for the midrange/tweeter, before reattaching the closure panel, be sure to remove the acoustic absorbent pads located behind the chamber. (See Fig. 2-11.) If the closure panel pinches an acoustic absorbent pad when it is secured, air leakage may occur, which may result in poor performance of this speaker system.

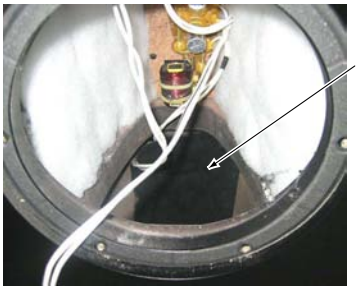
1. Acoustic absorbent pads around the input terminals



① Remove this acoustic absorbent pad. When reattaching, roll it and push it in under the reinforcing plate.
As only this acoustic absorbent pad must be fixed with adhesive, before pushing it in, apply adhesive to the side board of the cabinet.

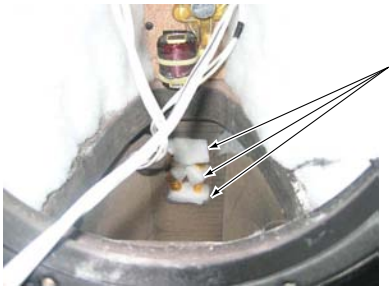
(Adhesive: DIABOND black/GYL-014)

Fig. 2-5: After the lower woofer is removed (1)



② Remove this acoustic absorbent pad. When reattaching, push it in along the lower surface of the reinforcing plate.
Fold the remaining part of the pad toward the bottom board side so that it forms an L shape.
The cords from the input terminals must be pulled out from the upper side of the acoustic absorbent pad.

Fig. 2-6: After the lower woofer is removed (2)



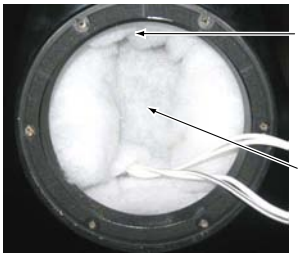
③ Remove this acoustic absorbent pad.
When reattaching, fold it in half lengthwise and push it in.

Fig. 2-7: After the lower woofer is removed (3)

In this state, remove or reattach the Network Assy.

Fig. 2-8: After the lower woofer is removed (4)

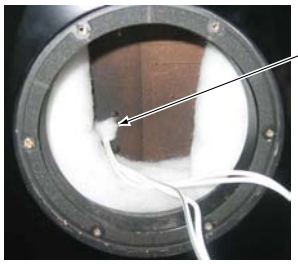
2. Acoustic absorbent pads inside the chamber for the midrange/tweeter



① Remove this acoustic absorbent pad. When reattaching, lay it along the upper board inside the chamber.

② Remove this acoustic absorbent pad When reattaching, place it along the surface inside the chamber so that it forms a U shape.

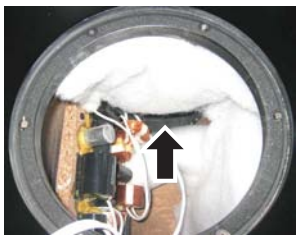
Fig. 2-9: After the midrange/tweeter is removed (1)



③ Remove this acoustic absorbent pad from the closure panel section. When reattaching, fold it in half lengthwise and push it in.

Fig. 2-10: After the midrange/tweeter is removed (2)

3. Acoustic absorbent pads around the Network Assy for the midrange/tweeter



④ Do not remove the acoustic absorbent pads around the Network Assy for midrange/tweeter. Remove the 2 rolled acoustic absorbent pads stuffed behind the space of the chamber for midrange /tweeter.

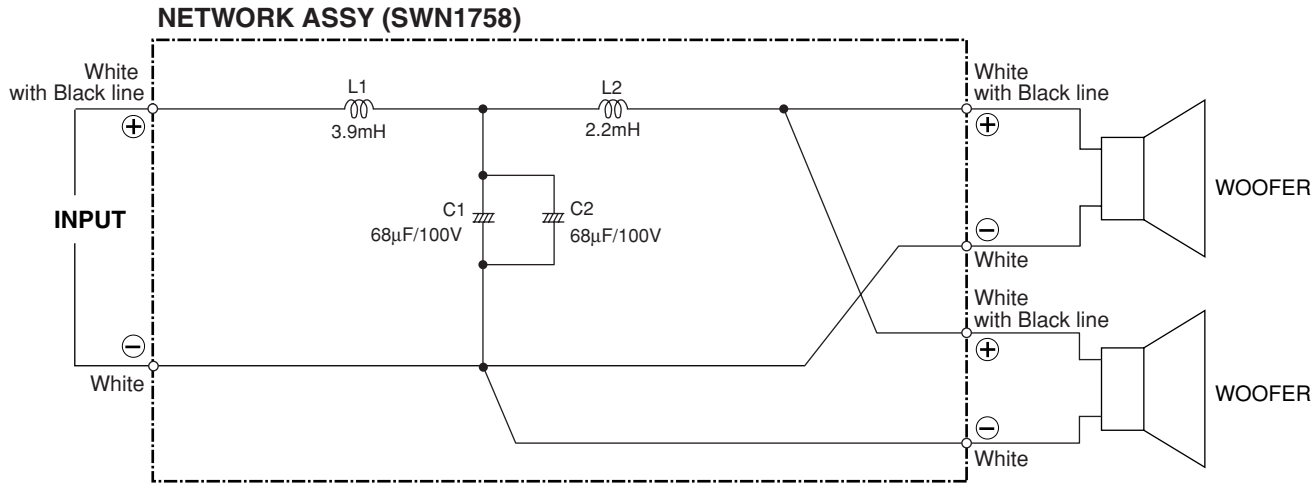
Insert your hand in the direction of the arrow to remove.

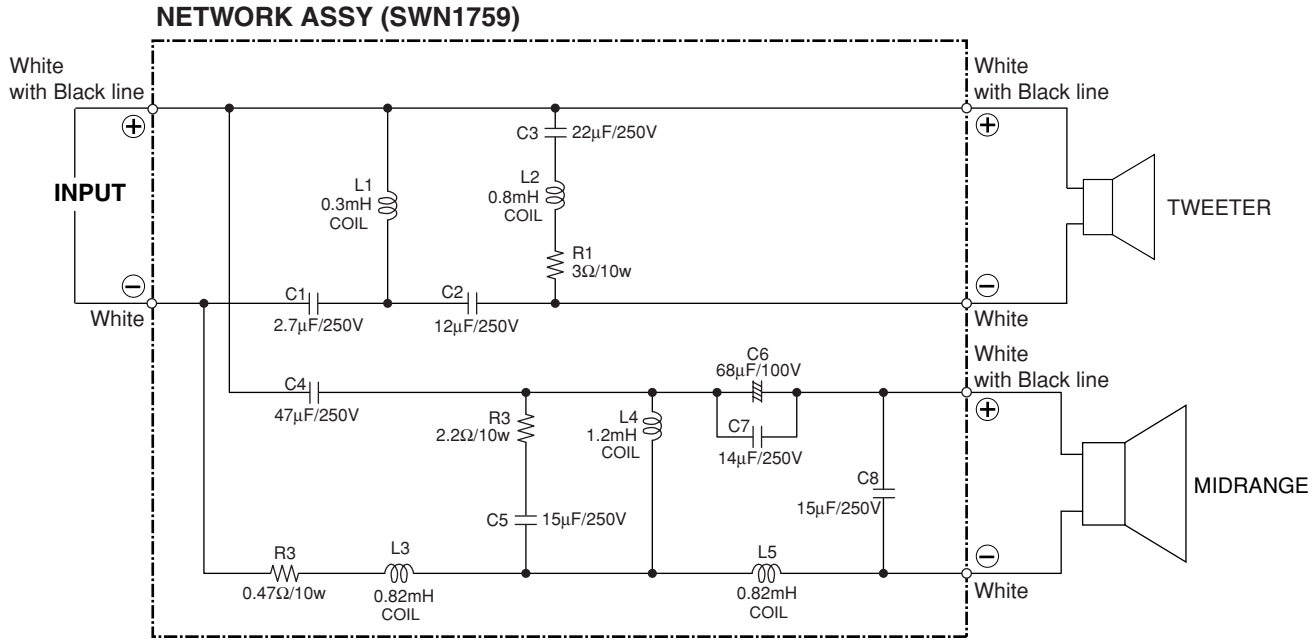
Removal/reattachment of the Network Assy for the midrange/ tweeter and of the closure panel must be done in this state.

Fig. 2-11: After the upper woofer is removed

When reattaching, lay one acoustic absorbent pad on another and roll them, and make 2 rolls of acoustic absorbent pads.
Place one roll lengthwise, push it into the front of the top board of the cabinet, then push another beneath of the first one.

3. SCHEMATIC DIAGRAM





4. JIG

■ Jigs list to be used

Jig Name	Part No.	Remarks
Phillips screwdriver (large) stubby type	GGK1012	For removal/reattachment of the Network Assy for the midrange unit and the tweeter
Soldering gun	GGK1069	For removal/reattachment of the speaker unit
Lead-free solder	GYP1006	For removal/reattachment of the speaker unit
Hexagonal wrench (4mm)	GGK1024	For removal/reattachment of the speaker unit
Box wrench (14 mm)	GGH-002	For removal/reattachment of the Network Assy

■ Adhesives list to be used

Adhesive Name	Part No.	Remarks
DIABOND (Black) (DB-1600WB)	GYL-014	For removal/reattachment of the Network Assy